AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): Coated and isolated carbon nanotubes, which are carbon nanotubes coated with 0.01-100 parts by weight of at least one type of aromatic condensation polymer selected from the group consisting of wholly aromatic polyamides, wholly aromatic polyesters, aromatic polyester carbonates, aromatic polycarbonates, semi-aromatic polyesters and wholly aromatic azoles, with respect to 100 parts by weight of the carbon nanotubes, and which are produced by a method in which monomers/polymers and carbon nanotubes are reacted, and the resulting reaction product is dissolved in an organic solvent or acidic solvent and filtered and isolated.

2. (original): Coated carbon nanotubes according to claim 1, wherein the aromatic condensation polymer is a wholly aromatic polyamide comprising groups of the following formulas (A) and (B):

$$\text{-NH-Ar}^1\text{-NH-} \qquad (A)$$

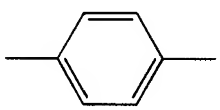
$$\text{-OC-Ar}^2\text{-CO-} \qquad (B)$$

wherein Ar^1 and Ar^2 each independently represent a C6-20 divalent aromatic group, and satisfying the following inequality (1):

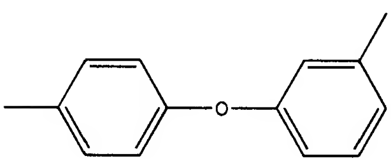
$$0.8 \leq a/b \leq 4/3 \qquad (1)$$

wherein a is the number of moles of the aromatic diamine repeating unit represented by formula (A) and b is the number of moles of the aromatic dicarboxylic acid repeating unit represented by formula (B).

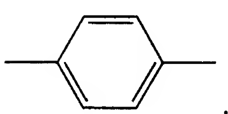
3. (original): Coated carbon nanotubes according to claim 2, wherein the wholly aromatic polyamide is one wherein Ar^1 is



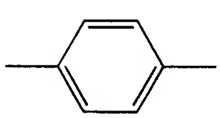
and/or



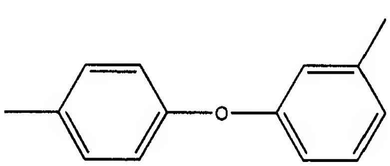
and Ar^2 is



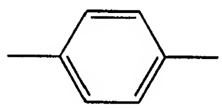
4. (original): Coated carbon nanotubes according to claim 2, wherein the wholly aromatic polyamide is a copolymer wherein Ar^1 is



and



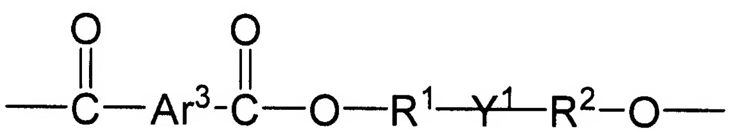
and Ar^2 is



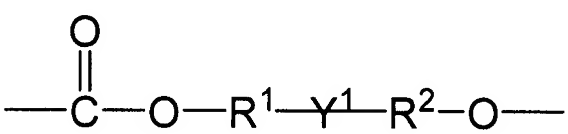
,

and the copolymerization ratio is 1:0.8 to 1:1.2.

5. (original): Coated carbon nanotubes according to claim 1, wherein the aromatic condensation polymer is one from among wholly aromatic polyesters, aromatic polyester carbonates and aromatic polycarbonates comprising one of the following structural units (C) and/or (D):

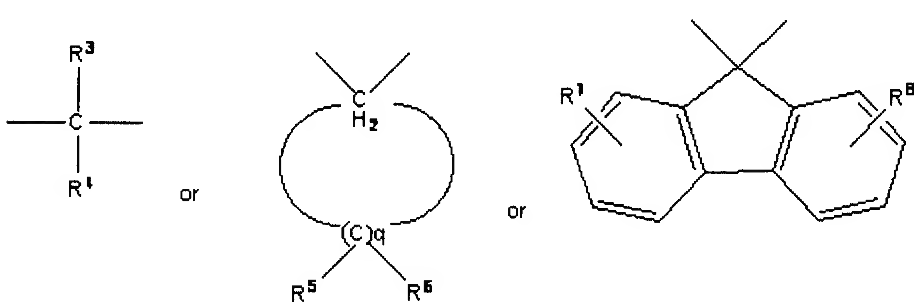


(C)



(D)

[wherein Ar^3 represents an optionally substituted C6-20 aromatic group, R^1 and R^2 each represent an optionally substituted phenylene group, and Y^1 represents a group selected from among the following groups (E):

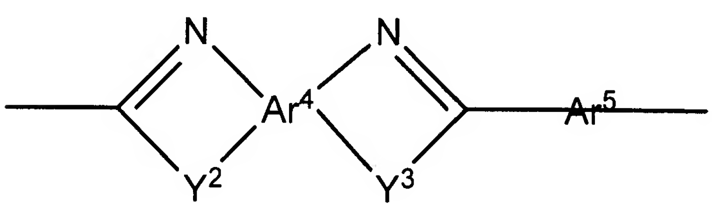


(E)

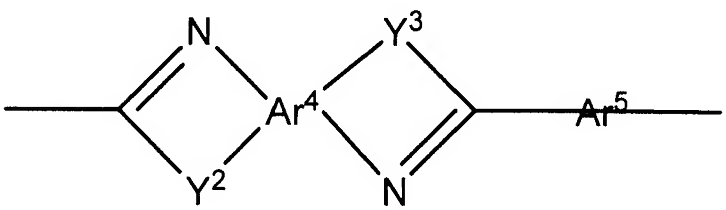
(wherein R^3-R^8 each independently represent at least one group selected from among hydrogen, halogens, C1-6 alkyl groups, C5 or C6 cycloalkyl groups, C6-12 aryl groups and C6-12 aralkyl groups, and q represents an integer of 4-10)].

6. (original): Coated carbon nanotubes according to claim 1, wherein the aromatic condensation polymer is a semi-aromatic polyester comprising an aromatic dicarboxylic acid component and an aliphatic diol component.

7. (original): Coated carbon nanotubes according to claim 1, wherein the aromatic condensation polymer is a wholly aromatic azole conforming to the following formula (F) and/or (G):



(F)



(G)

(wherein Y^2 and Y^3 are each independently selected from the group consisting of O, S and NH, Ar^4 represents a C6-20 tetravalent aromatic group, and Ar^5 represents a C6-20 divalent aromatic group).

8. (original): A process for production of coated carbon nanotubes according to claim 2, wherein at least one type of aromatic diamine represented by formula (H) below and at least one type of aromatic dicarboxylic acid diaryl ester represented by formula (J) below or the aromatic dicarboxylic acid diacyl halide represented by formula (K) below:

$$NH_2\text{-}Ar^1\text{-}NH_2 \qquad (H)$$

$$R^9\text{-}O_2C\text{-}Ar^2\text{-}CO_2\text{-}R^{10} \qquad (J)$$

$$X^1OC\text{-}Ar^2\text{-}COX^2 \qquad (K)$$

(wherein R^9 and R^{10} each independently represent a C6-20 aromatic group, Ar^1 and Ar^2 each independently represent a C6-20 divalent aromatic group, and X^1 and X^2 represent halogens) are charged in proportions simultaneously satisfying the following inequality (2):

$$0.8 \leq c/d \leq 4/3 \qquad (2)$$

(wherein c is the number of moles of the aromatic diamine represented by formula (H), and d is the number of moles of the aromatic dicarboxylic acid diaryl ester represented by formula (J) or the aromatic dicarboxylic acid diacyl halide represented by formula (K)),

and then the carbon nanotubes (N) are added for reaction in a proportion satisfying the following inequality (3):

$$0.001 \leq (n)/(x) \leq 100 \qquad (3)$$

(wherein (x) represents the total parts by weight of the monomer components comprising the aromatic diamine (H), the aromatic dicarboxylic acid diaryl ester (J) and the aromatic dicarboxylic acid diacyl halide (K), and (n) represents the parts by weight of the carbon nanotubes (N)),

after which the resulting reaction product is dissolved in an organic solvent or acidic solvent and the polymer-coated carbon nanotubes are filtered and isolated.

9. (original): A process for production of coated carbon nanotubes according to claim 2, wherein at least one type of aromatic diamine represented by formula (H) below and at least one type of aromatic dicarboxylic acid diaryl ester represented by formula (J) below or the aromatic dicarboxylic acid diacyl halide represented by formula (K) below:

$$NH_2\text{-}Ar^1\text{-}NH_2 \qquad (H)$$

$$R^9\text{-}O_2C\text{-}Ar^2\text{-}CO_2\text{-}R^{10} \qquad (J)$$

$$X^1OC\text{-}Ar^2\text{-}COX^2 \qquad (K)$$

(wherein R^9 and R^{10} each independently represent a C6-20 aromatic group, Ar^1 and Ar^2 each independently represent a C6-20 divalent aromatic group, and X^1 and X^2 represent halogens) are charged for reaction in proportions simultaneously satisfying the following inequality (2)':

$$1 < c/d \leq 4/3 \qquad (2)'$$

(wherein c is the number of moles of the aromatic diamine represented by formula (H), and d is the number of moles of the aromatic dicarboxylic acid diaryl ester represented by formula (J) or the aromatic dicarboxylic acid diacyl halide represented by formula (K)),

to synthesize a wholly aromatic polyamide having more amine ends than carboxylic acid derivative ends, after which carbon nanotubes (N) obtained by surface treatment in an acidic solution at pH 0.01-2 are added for reaction in a proportion satisfying the following inequality (3):

$$0.001 \leq (n)/(x) \leq 100 \qquad (3)$$

(wherein (x) represents the parts by weight of the wholly aromatic polyamide with amine ends, and (n) represents the parts by weight of the carbon nanotubes (N)),

and then the resulting reaction product is dissolved in an organic solvent or acidic solvent and the polymer-coated carbon nanotubes are filtered and isolated.

10. (original): A process for production of coated carbon nanotubes according to claim 5, wherein an aromatic dicarboxylic acid component represented by the following formula (L):

$$HOOC\text{-}Ar^3\text{-}COOH \qquad (L)$$

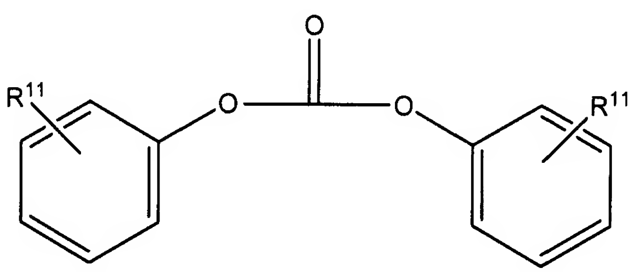
(wherein Ar^3 has the same definition as in formula (C) above),

an aromatic diol component represented by the following formula (O):

$$HO\text{-}R^1\text{-}Y^1\text{-}R^2\text{-}OH \qquad (O)$$

(wherein R^1, R^2 and Y^1 have the same definitions as in formulas (C) and (D)),

and a diaryl carbonate represented by the following formula (P):



(P)

(wherein the two R^{11} groups may be the same or different, and each is selected from among hydrogen, halogens, hydroxyl, carboxyl, ester groups and C1-6 alkyl groups),

are charged in molar ratios simultaneously satisfying the following inequalities (4) and (5):

$$0 \leq e/f \leq 1.05 \qquad (4)$$

$$0.9 \leq g/(e+f) \leq 1.1 \qquad (5)$$

(wherein e is the number of moles of the aromatic dicarboxylic component, f is the number of moles of the diol component and g is the number of moles of the diaryl carbonate component), and then the carbon nanotubes (N) are added for reaction in a proportion satisfying the following inequality:

$$0.001 \leq (n)/(m) \leq 100 \qquad (6)$$

(wherein (m) represents the total parts by weight of the monomer components including the aromatic dicarboxylic acid component (e), diol component (f) and diaryl carbonate (g), and (n) represents the parts by weight of the carbon nanotubes (N)),
after which the resulting reaction product is dissolved in an organic solvent and the polymer-coated carbon nanotubes are filtered and isolated.

11. (original): A process for production of coated carbon nanotubes according to claim 6, wherein an aromatic dicarboxylic acid component and an aliphatic diol component are charged in a molar ratio satisfying the following inequality (7):

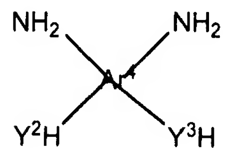
$$0.8 \leq e'/f' \leq 1.2 \qquad (7)$$

(wherein e' is the number of moles of the aromatic dicarboxylic acid component and f' is the number of moles of the diol component),
and then the carbon nanotubes (N) are added for reaction in a proportion satisfying the following inequality (8):

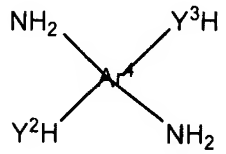
$$0.001 \leq (n)/(m) \leq 100 \qquad (8)$$

(wherein (m) represents the total parts by weight of the monomer components including the aromatic dicarboxylic acid component (e) and the diol component (f), and (n) represents the parts by weight of the carbon nanotubes (N)),
after which the obtained reaction product is dissolved in an organic solvent, and the polymer-coated carbon nanotubes are filtered and separated.

12. (original): A process for production of coated carbon nanotubes according to claim 7, wherein at least one compound selected from the group consisting of aromatic amine derivatives represented by the following formulas (Q) and (R):



(Q)



(R)

(wherein Y^2 and Y^3 are each independently selected from the group consisting of O, S and NH and Ar^4 represents a C6-20 tetravalent aromatic group, or (Q) and (R) are optionally hydrochlorides)

and their hydrochlorides, and at least one aromatic dicarboxylic acid derivative represented by the following formula (S):

$$R^{12}\text{-}O_2C\text{-}Ar^5\text{-}CO_2\text{-}R^{13} \qquad (S)$$

(wherein Ar^5 independently represents a C6-20 divalent aromatic group, and R^{12} and R^{13} each independently represent hydrogen or a C6-20 aromatic group)

are charged in a molar ratio simultaneously satisfying the following inequality (9):

$$0.8 \leq (h+i)/j \leq 1.2 \qquad (9)$$

(wherein h is the number of moles of the aromatic amine derivative represented by formula (Q) above, i is the number of moles of the aromatic amine derivative represented by formula (R) above, and j is the number of moles of the aromatic dicarboxylic acid derivative represented by formula (S) above),

and then the carbon nanotubes (N) are added for reaction in a proportion satisfying the following inequality (10):

$$0.001 \leq (n)/(m) \leq 100 \qquad (10)$$

(wherein (m) represents the total parts by weight of the aromatic diamine derivative components (Q),(R) and the aromatic dicarboxylic acid derivative component (S), and (n) represents the parts by weight of the carbon nanotubes (N)),

after which the resulting reaction product is dissolved in an organic solvent and the carbon nanotube component is filtered and isolated.

13. (original): A process for production of coated carbon nanotubes according to any one of claims 8 to 12, characterized in that the carbon nanotubes used are obtained by surface treatment in an acidic solution of pH 0.01-2.

14. (original): A process for production of coated carbon nanotubes according to any one of claims 8 to 12, characterized in that the monomers are charged for reaction into a carbon nanotube dispersion prepared by dispersing the carbon nanotubes in a solvent by physical treatment using a ball mill, bead mill or homogenizer.

15. (original): A process for production of coated carbon nanotubes according to any one of claims 8 to 12, characterized in that the carbon nanotubes used have a mean particle size of 0.01-5 μm.

16. (original): A process for production of coated carbon nanotubes according to any one of claims 8 to 12, characterized in that the carbon nanotubes used have a mean diameter of 0.3-200 nm.

17. (original): An aromatic condensation polymer composition comprising 100 parts by weight of at least one type of aromatic condensation polymer selected from the group consisting of wholly aromatic polyamides, wholly aromatic polyesters, aromatic polyester carbonates, aromatic polycarbonates, semi-aromatic polyesters and wholly aromatic azoles, and 0.01-100 parts by weight of coated carbon nanotubes according to claim 1.

18. (original): An aromatic condensation polymer composition according to claim 17, wherein the aromatic condensation polymer used to coat the carbon nanotubes and the aromatic condensation polymer serving as the matrix of the composition are wholly aromatic polyamides comprising the following formulas (A) and (B):

$$\text{-NH-Ar}^1\text{-NH-} \qquad \text{(A)}$$

$$\text{-OC-Ar}^2\text{-CO-} \qquad \text{(B)}$$

(wherein Ar^1 and Ar^2 each independently represent a C6-20 divalent aromatic group), and satisfying the following inequality (1):

$$0.8 \leq a/b \leq 4/3 \qquad (1)$$

(wherein a is the number of moles of the aromatic diamine repeating unit represented by formula (A), and b is the number of moles of the aromatic dicarboxylic acid repeating unit represented by formula (B)).

19. (original): A molded article having carbon nanotubes oriented in the lengthwise direction or in the plane of the molded article, characterized by comprising a composition consisting of 100 parts by weight of at least one type of aromatic condensation polymer selected from the group consisting of wholly aromatic polyamides, wholly aromatic polyesters, aromatic polyester carbonates, aromatic polycarbonates, semi-aromatic polyesters and wholly aromatic azoles, and 0.01-100 parts by weight of carbon nanotubes coated with an aromatic condensation polymer according to claim 1, and by having an orientation coefficient F of 0.1 or greater for the carbon nanotubes as determined from the following formula (11):

$$< \cos^2 \phi >= \frac{\int_0^{\pi/2} I(\phi)\cos^2\phi \sin\phi d\phi}{\int_0^{\pi/2} I(\phi)\sin\phi d\phi} \qquad (11)$$

$$F = \frac{3 < \cos^2 \phi > -1}{2}$$

(wherein φ represents the azimuth in X-ray diffraction measurement and I represents the 002 diffraction intensity of graphite).

20. (original): A molded article having carbon nanotubes oriented in the lengthwise direction of the molded article, characterized by comprising a composition consisting of 100 parts by weight of at least one type of aromatic condensation polymer selected from the group consisting of wholly aromatic polyamides, wholly aromatic polyesters, aromatic polyester carbonates, aromatic polycarbonates, semi-aromatic polyesters and wholly aromatic azoles, and 0.01-100 parts by weight of coated carbon nanotubes according to claim 1, and in that the carbon nanotubes have an orientation P of at least 0 and no greater than 0.7, as represented by the following equation (12):

$$P = I_{YY}/I_{XX} \qquad (12)$$

(wherein I_{XX} represents the G band intensity when the laser polarization plane is oriented parallel to the lengthwise direction or parallel to the plane of the molded article, and I_{YY} represents the G band intensity when the laser polarization plane is oriented perpendicular to the lengthwise direction or perpendicular to the plane of the molded article, in the Raman spectrum from the carbon nanotubes in polarized Raman spectroscopy).

21. (original): A molded article according to claim 19 or 20, wherein the aromatic condensation polymer used to coat the carbon nanotubes and the aromatic condensation polymer serving as the matrix of the composition are wholly aromatic polyamides comprising the following formulas (A) and (B):

$$\text{-NH-Ar}^1\text{-NH-} \qquad (A)$$

$$\text{-OC-Ar}^2\text{-CO-} \qquad (B)$$

(wherein Ar^1 and Ar^2 each independently represent a C6-20 divalent aromatic group), and satisfying the following inequality (1):

$$0.8 \leq a/b \leq 4/3 \qquad (1)$$

(wherein a is the number of moles of the aromatic diamine repeating unit represented by formula (A), and b is the number of moles of the aromatic dicarboxylic acid repeating unit represented by formula (B)).

22. (original): A molded article according to claim 19 or 20, wherein the molded article is a fiber.

23. (original): A molded article according to claim 19 or 20, wherein the molded article is a film.